

## BATTERY SEPARATOR, ITS MANUFACTURE AND ALKALINE SECONDARY BATTERY

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### Abstract

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**PURPOSE:** To provide a battery separator with high mechanical strength and high electrolyte retention factor, manufacturing method for the separator, and an alkaline secondary battery excellent in cycle characteristic, using this separator.

**CONSTITUTION:** In a wet process nonwoven fabric in which at least one kind of thermoplastic short fibers and heat bonding short fibers are three-dimensionally entangled each other by water stream, part or whole of the heat bonding short fibers is melted to bond fibers, 0.05-0.5wt.% nonionic surface active agent based on the total weight of the nonwoven fabric is attached on the surface of the fibers. A battery separator obtained has a speed of liquid absorption of 40mm or more and an electrolyte retention factor of 85% or more, and it is preferably manufactured in such a way that water stream is struck against a mixed sheet comprising at least one kind of thermoplastic short fibers and heat bonding short fibers, produced in a paper machine process to three-dimensionally entangle these fibers, part or whole of the heat bonding short fibers is melted by heat treatment to obtain a nonwoven fabric, then 0.05-0.5wt.% nonionic surface active agent based on the total weight of the nonwoven fabric is attached on the surface of the nonwoven fabric.

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## SEPARATOR FOR ALKALINE SECONDARY BATTERY